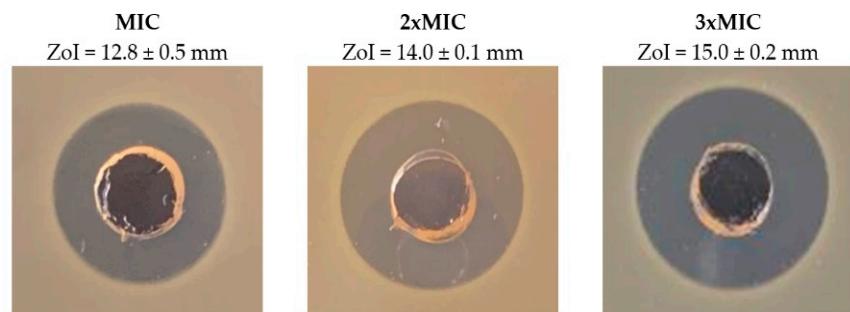


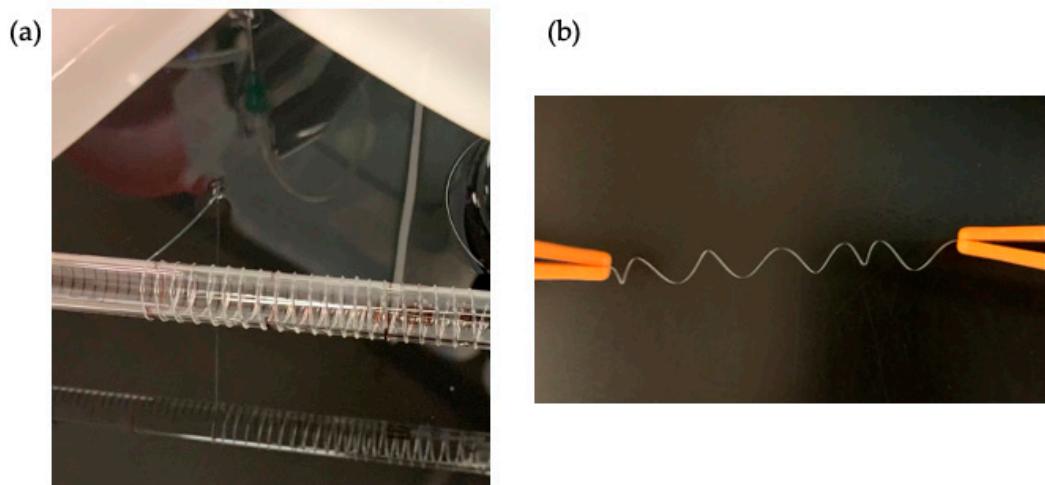
## Supporting Information

**Table S1.** Absorbance values for MIC determination of Nisin Z.

| Concentration<br>( $\mu\text{g/mL}$ ) | Absorbance (600 nm) |       |       |       |              |       |        |       |       |       |
|---------------------------------------|---------------------|-------|-------|-------|--------------|-------|--------|-------|-------|-------|
|                                       | 1000                | 500   | 250   | 125   | 62.5         | 31.25 | 15.625 | 7.812 | 3.906 | 1.953 |
| <b>0 hours</b>                        | 0.677               | 0.718 | 0.615 | 0.185 | <b>0.082</b> | 0.071 | 0.074  | 0.072 | 0.081 | 0.074 |
| <b>24 hours</b>                       | 0.209               | 0.250 | 0.116 | 0.092 | <b>0.080</b> | 0.147 | 0.455  | 0.393 | 0.362 | 0.378 |



**Figure S1.** ZoI of Nisin Z solutions at a concentration of (a) 62.5  $\mu\text{g/mL}$  (MIC), (b) 125  $\mu\text{g/mL}$  (2xMIC) and (c) 187.5  $\mu\text{g/mL}$  (3xMIC).



**Figure S2.** Aspect of the SAGN fibers (a) during and (b) after wet-spinning processing.

**Table S2.** ATR-FTIR peaks detected and identification of the contribution of a specific component (polymer).

| Wavenumber (cm <sup>-1</sup> ) | Associated compound, element or sample | Functional group assigned                                       |
|--------------------------------|--|---|
| ≈ 3300                         | All                                    | -OH stretching  |
| 1658                           | GN                                     | amide-I, C-O and C-N stretching vibrations                      |
| 1640                           | NZ                                     | Amide groups  |
| 1585                           | SAGN                                   | NH <sub>3</sub> <sup>+</sup>                                    |
| 1573                           | SAGN                                   | COO <sup>-</sup>  |
| 1530                           | NZ                                     | Primary amines  |
| 1489                           | GN                                     | -CH <sub>2</sub> bending  |
| 1095                           | SA                                     | C-O stretching vibration  |
| 1033                           | SA                                     | C-C stretching vibration  |
| 1030                           | GN                                     | Amine groups stretching vibration                               |
| 1020                           | SA                                     | O-C-O stretching vibration                                      |
| 929                            | SA                                     | C-O stretching vibration (uronic acid residues)                 |
| 864                            | SA                                     | C-O-C stretching vibration ( $\beta$ -mannuronic acid residues) |
| 1431 - 1438                    | SA                                     | COO <sup>-</sup> symmetric stretching                           |
| 1608 - 1635                    | SA                                     | COO <sup>-</sup> asymmetric stretching                          |